

**What is claimed is:**

Sub  
Au

1. A method of providing a display surface zoom in a display controller system having a main surface memory and at least one zoom display device, the method comprising the steps of:

receiving user input defining a fixed position frame portion within said main surface memory;

determining a resolution of said at least one zoom display device and adjusting an aspect ratio of said portion defined by said user input to correspond to said resolution;

scaling said portion of said main surface memory;

converting said scaled portion of said main surface memory into a display signal; and

outputting said display signal to said at least one zoom display device.

2. The method as claimed in claim 1, wherein said step of converting includes incorporating a representation of a cursor in said display signal, said cursor having a position defined by a cursor position memory used for said main surface memory.

3. The method as claimed in claim 1, further comprising a step of filtering said portion to provide for an image not illustrating coarse pixels.

4. The method as claimed in claim 3, wherein said user input further defines a user's choice of filtering or non-filtering.

5. The method as claimed in claim 1, wherein said user input further includes a cursor control device input used to control a cursor, and said portion is caused to be dragged or moved over said main surface memory by movement of said cursor.

6. The method as claimed in claim 1, wherein said scaling comprises using a drawing engine associated with said display controller system to scale said portion into a buffer.
7. The method as claimed in claim 1, wherein said scaling comprises using a backend scaler associated with said display controller system to scale said portion.
8. The method as claimed in claim 7, wherein said scaling further comprises using a backend scaler associated with said display controller system to scale a hardware cursor associated with said portion.
9. The method as claimed in claim 6, wherein said scaling further comprises using a drawing engine associated with said display controller system to scale a hardware cursor associated with said portion into a separate hardware cursor buffer.
10. The method as claimed in claim 6, wherein said scaling further comprises using a drawing engine associated with said display controller system to scale a hardware cursor associated with said portion and overlay it onto said buffer.
11. The method as claimed in claim 6, wherein said image data is stored alternately in one of a plurality of buffers, said step of converting comprising reading said image data alternately from one of said buffers so as to reduce image flicker and ensure complete buffer update before displaying.
12. The method as claimed in claim 1, wherein said display controller system comprises a single display, and said user input causes said single display to switch between displaying said portion and displaying essentially all of said main surface memory, whereby said zoom is provided independently of an application program.

13. The method as claimed in claim 1, wherein said display controller system comprises at least two displays, a first one of which displaying essentially all of said main surface memory, and a second one of which displaying said scaled portion.

14. The method as claimed in claim 13, wherein said second display has a different image resolution than an image resolution of said first display, said converting comprising automatically adjusting an image resolution of said signal representing said portion to match said image resolution of said second display.

15. The method as claimed in claim 1, wherein said step of receiving user input comprises:

receiving input defining at least two portions of said main display surface to be selectively displayed on one of said at least one zoom display device; and

receiving input selecting one of said at least two portions of said main display surface to be displayed on said one of said at least one zoom display device.

16. The method as claimed in claim 15, wherein said user input causes a toggling between said portions

17. The method as claimed in claim 1, wherein said step of receiving user input further comprises:

associating said input defining said at least one said portion with one of a plurality of application programs,

wherein said step of receiving input selecting one of said at least two fractional portions comprises determining which one of a plurality of application programs is currently active and providing output to said main surface memory in order to select from at least one of said portions of said main display surface

associated with the application program currently outputting to said main display surface.

18. The method as claimed in claim 17, wherein a change in application program currently active and outputting to said main display surface is detected and caused to automatically change selection of said at least one of said at least two fractional portions.

19. The method as claimed in claim 1, wherein said step of receiving user input comprises:

receiving input defining a plurality of portions of said main display surface to be selectively displayed on different zoom display devices; and

receiving input selecting one of said portions of said main display surface to be displayed on each one of said zoom display devices.

20. The method as claimed in claim 19, wherein said user input causes a toggling between said portions.

21. A method of providing a display surface zoom in a display controller system having a main surface memory and at least one zoom display device, the method comprising the steps of:

receiving user input defining a fractional portion of said main surface memory to be scaled and displayed, said fractional portion being a non-integer fraction of said main surface memory;

determining a resolution of said at least one zoom display device and adjusting an aspect ratio of said portion defined by said user input to correspond to said resolution;

scaling said portion of said main surface memory;

converting said scaled portion of said main surface memory into a display signal; and

outputting said display signal to said at least one zoom display device.

22. The method as claimed in claim 21, wherein said step of converting includes incorporating a representation of a *cursor* in said display signal, said cursor having a position defined by a cursor position memory used for said main surface memory.
23. The method as claimed in claim 21, further comprising filtering said portion to provide for an image not illustrating coarse pixels.
24. The method as claimed in claim 23, wherein said user input further defines a user's choice of filtering or non-filtering.
25. The method as claimed in claim 21, wherein said user input further includes a pointing device output used to control a cursor, and said portion is caused to be dragged or moved over said main surface memory by movement of said cursor.
26. The method as claimed in claim 21, wherein said scaling comprises using a drawing engine associated with said display controller system to generate image data corresponding to said portion.
27. The method as claimed in claim 21, further comprising a step of accepting user input adjusting said non-integer fraction to be increased and to be decreased, wherein said user input can cause a zoom magnification to vary upwards and downwards.

009760-11492560

add  
B12 →